AMSAT News Service Weekly Bulletins
Issue: ANS-257
Date: 1991-09-14
Sources: amsat-ans-1991-ans-257.01.txt

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|               Relayed from AMSAT BBS  NETWORK                |
|                N8EMR's Ham BBS, 614-895-2553                 |
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SB ALL @ AMSAT $ANS-257.01
AO-16 BBS SHUTS DOWN TEMPORARILY

HR AMSAT NEWS SERVICE BULLETIN 257.01 FROM AMSAT HQ
SILVER SPRING, MD SEPTEMBER 14, 1991
TO ALL RADIO AMATEURS BT

AO-16 BBS "Goes Down" Temporarily During Upload Of New File Server Software

In an attempt to upload a "new-and-improved" version of the File Server software, known as FTL0, AO-16's on-board computer (OBC) "hiccupped" over North Africa on 11-Sept-1991 at 20:35 UTC. This immediately sent the AO-16 world-wide Ground Command Team of I2KBD, KB5MU, WD0E, and its Team Leader WB9ANQ, into action. This latest version of FTL0 had been scheduled to go into effect early this month and it incorporates many new and excellent features which are now available on UO-14's BBS. G0/K8KA and NK6K have corrected "bugs" and enhanced the efficiency of the BBS operation. The FTL0 uploading process was begun again on 13-Sept-1991 at 02:50 UTC after NK6K found the "pesky" parameter which was not set to the "proper" value for AO-16. WD0E reports that the FTL0 software reload was completed by KB5MU on 14-Sept-91 at 05:00 UTC. All users will be pleased with this new version of the BBS software because it now incorporates the "hole-filling" feature. Specifically, it works like this: If you are "broadcasting" a file from AO-16 and you don't get it completely downloaded during a pass, you don't have to have the BBS restart the process again from the beginning of the file on the next pass. According to WD0E, you simply use the "FILL" function on the newest version of the PB.EXE program and PB will remember where you were and the broadcast of the file will start from that point. Also, if you only get "bits-and-pieces" of a file from AO-16, the "hole-filling" feature will only download what you need to complete the file. WD0E points that this is much more efficient way to move files from the PACSATs and encourages users to use this feature for now on.

The Command Team regrets to inform all users that the files which were stored aboard AO-16 before the OBC crash are lost. However, the good news is that the new FTL0 software will allow the number of files to be stored on AO-16's BBS to be increase from 700 to 800 files! If users wish to utilize the many new features of this updated FTL0, they need to download from UO-14, or from COMPUSERVE or from the AMSAT/DRIG land-line BBS the latest version of the PB.EXE (PACSAT BROADCAST) program. PB.EXE and the associated documentation can also be found on COMPUSERVE's HAMNET Forum under the file name PB0509.ZIP. Likewise, it can be downloaded from the AMSAT/DRIG land-line BBS, (214) 394-7438, from the "files" menu. This newest version of PB.EXE will have a version number of [910509m] located in its "options-bar." But NK6K would like to point out that older versions of the PB.EXE program will continue to work but obviously you will not be able to use the "hole-filling" features.

Please stay tuned to the AMSAT News Service (ANS) bulletins for further updates on the status of AO-16.

/EX
SB ALL @ AMSAT $ANS-257.02
NEW AO-16 BBS FEATURES: PART I

HR AMSAT NEWS SERVICE BULLETIN 257.02 FROM AMSAT HQ
SILVER SPRING, MD SEPTEMBER 14, 1991
TO ALL RADIO AMATEURS BT

NK6K Explains The New File Server S/W Features For AO-16's BBS, Part I

We have incorporated the latest changes from G0/K8KA into the AO-16 version of FTL0 and MFILE. These changes will be in effect when the BBS comes back up in the next day or two.

Here are the visible and not so visible changes in the new upload.

File Broadcast

The broadcast facility should now be far more useful. The following changes have been made:

1) Only one file per user is allowed in the broadcast queue. If you request a second file while you have another file in the queue, the first file is replaced by the second.

2) A file is removed from the broadcast queue after 10 minutes, even if it has not been completely sent. This will avoid having large files still on the queue after the originator has passed out of range.

3) A queue status message will be sent each 10 seconds. This will let you know if your file is still on the queue, and when you might expect to see your frames. This status message is sent to PBLIST, the format is

   PB: call call call

   where call is the callsign of the station which requested a file. If a command station has marked a file for permanent broadcast, the file number followed by "L" is displayed. For example,

   PB: nk6k g0k8ka 1904L

   The left-most call has broadcast frames sending, the next call will be next. Each call gets 10 seconds. This parameter is variable, and may be changed. If there are four users logged in and downloading files, there may only be one or two broadcast frames sent in any one slot.

4) The hole fill command is now implemented. If PB shows that some frames are missing, use the Fill command to get them. Do not use the Begin command a second time.

5) If you request a file that does not exist, you will see a frame sent to your call containing "NO -2".

6) If you request a file when the BBS is shut, or if the broadcast queue is full, you will see a frame sent to your call containing "NO -1". Ten files can be on the queue at one time.

We suggest that you use PG to get a file directory, then use PB to broadcast files and fill holes. Use the PB Grab command to capture files started by other users. You may use the Fill command for files you started as well as for files started by others.

[The AMSAT News Service would like to thank NK6K for the information which went into this bulletin.]

/EX
SB ALL @ AMSAT $ANS-257.03

NEW AO-16 BBS FEATURES: PART II

HR AMSAT NEWS SERVICE BULLETIN 257.03 FROM AMSAT HQ
SILVER SPRING, MD SEPTEMBER 14, 1991
TO ALL RADIO AMATEURS BT

NK6K Explains The New File Server S/W Features For AO-16's BBS, Part II

File Wash

The file system wash has changed. Previously, only the in-use file blocks got washed. Now, all file blocks will be washed. This has several side effects.

1) The in-use file clusters will now get washed less often. AO-16 only has about 3MB of file space in use at any one time. It is not the same 3MB though, as files are written and deleted, free space creeps around.

   We'll now be washing more than twice that, so the revisit rate will be slower than it was. To make up for that, we'll wash a cluster every two seconds rather than every 4 seconds. A cluster is 1024 bytes. We need to watch to see if this has an visible impact on BBS through-put and power utilization.

2) We shouldn't see the bogus uncorrectable errors that show up because sectors in an free cluster that is appended to a growing file haven't been washed, and can have old errors which have become double bit errors over time. Any double bit error now will be because we aren't washing fast enough, or because a Single Event Upset (SEU) flipped more than one bit in the sector.

3) The amount of memory that gets washed will now be a fixed size, so we can make valid statements about the number of "errors-per-bit-per-fortnight."

4) After this warm start, there will be a large number of single and double bit errors as memory which was never washed gets washed for the first time. It will take 4 or 5 hours to wash all the way through once, these errors should be discarded from the status pool.

5) It will not (and has not) been valid to plot SEUs vs sub-satellite point. Since it can take up to 4 hours to get to a particular block, the correction time can be up to 4 hours away from where the error occurred. We would tend to see errors anywhere on the orbit track within 4 hours of the South Atlantic Anomaly (SAA), and in fact the "showlog" program shows this on the UO-14 data. UO-14 washes faster (once a second because their CPU clock is 8 MHz vs the AO-16 4 MHz clock), and has half the memory, so the revisit rate is less than an orbit. SHOWLOG shows two clusters of errors, one over the SAA, and one opposite on the back side. Even though the usage is highest over Europe and the US, where additional errors caused by reading files would be occur, the error rate displayed by showlog is not very high over Europe because the geometry is such that Europe is not seen within a wash time of the SAA.

6) The name of the error log is now ELTLOG instead of ELTLOGXX.

7) If the error record's function type is 2 (read), the file number is not valid. If the function is 1 (wash), the file number has the following meaning:

   -2 Free cluster

   -1 FAT cluster

    0 Directory cluster

other File Number

Bug Fixes
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1) The correct SSID will now be sent in the broadcast request "ok" messages.

2) Broadcast requests are now added at the end of the current queue rather than a random location.

3) The problem with broadcasting partial files is fixed.

[The AMSAT News Service would like to thank NK6K for the information which went into this bulletin.]

/EX
SB ALL @ AMSAT $ANS-257.04
AO-13 OPS NETS RETURN!

HR AMSAT NEWS SERVICE BULLETIN 257.04 FROM AMSAT HQ
SILVER SPRING, MD SEPTEMBER 14, 1991
TO ALL RADIO AMATEURS BT

WB6LLO Issues The Following AO-13 Operation's Net Schedule

AMSAT Operations Nets are being resumed. AO-13 Mode B Nets on 145.950 MHz, and Mode J/L Nets on 435.970 MHz will start with the following schedule:

Date	UTC	Mode	Phs	NCS	Alt NCS
21-Sep-91	14:30	B	146	WJ9F	WB6LLO
28-Sep-91	18:00	B	142	WB6LLO	WJ9F

Guest commentators are planned. Join the net if you have questions.

/EX
SB ALL @ AMSAT $ANS-257.05
NEW AO-13 TRANSPONDER SCHED

HR AMSAT NEWS SERVICE BULLETIN 257.05 FROM AMSAT HQ
SILVER SPRING, MD SEPTEMBER 14, 1991
TO ALL RADIO AMATEURS BT

Fall AO-13 Transponder Schedule Announced; AO-10 Available For Use

The fall AO-13 transponder schedule will be as follows:

	!	18-SEP-91 To 12-DEC-91	
Mode-B	!	MA 000 to MA 095	< Except Nov 17- Dec 25
Mode-JL	!	MA 095 to MA 125	< B Transponder OFF MA 10-40
Mode-LS	!	MA 125 to MA 130	
Mode-S	!	MA 130 to MA 140	
Mode-B	!	MA 140 to MA 256	Perigee eclipses, Min 9, typical
Omnis	!	MA 230 to MA 030	29, max 60 mins until end 1991

The spacecraft attitude has been calculated to be:

BLON/BLAT 180/1

AMSAT-OSCAR-10 is currently available for Mode B operation when it is view of your QTH. PLEASE DO NOT attempt to use AMSAT-OSCAR-10 if you hear the beacon or the transponder signals FMing.

/EX
SB ALL @ AMSAT $ANS-257.06
PACSAT NEWS

HR AMSAT NEWS SERVICE BULLETIN 257.06 FROM AMSAT HQ
SILVER SPRING, MD SEPTEMBER 14, 1991
TO ALL RADIO AMATEURS BT

AO-16 Experimenter's Day Schedule Announced

AO-16 Command Station Bruce Rahn, WB9ANQ, has announced the following PACSAT Experimenter's Day schedule for the remainder of September and first week of October:

DATE	START TIME	END TIME	MODE
18 Sep	0530 UTC - 18 Sep	0640 UTC - 19 Sep	RCO
25 Sep	0530 UTC - 25 Sep	0500 UTC - 26 Sep	RCO
02 Oct	2110 UTC - 01 Oct	2040 UTC - 02 Oct	RCO

NOTE: This schedule will be in effect only when AO-16 returns to service (see other ANS Bulleting about the AO-16 crash)

RCO: Raised Cosine Only

Operation of the S-Band transmitter with the raised cosine transmitter will resume in the fall.

While Experimenter's Day operations are scheduled to be conducted weekly, users are reminded that these operations may be shortened or canceled to allow uploading of improved spacecraft software. Watch for bulletins in the BBS and the telemetry text frame of AO-16 for changes to the schedule.

Users are requested to send reception reports and comments to WB9ANQ: @AO-16, @LO-19, @UO-14, or via COMPUSERVE to 74017,2454.

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